

## **Amendments to the Specification:**

*On page 1, after the title, insert the following new paragraph:*

### **CROSS-REFERENCE TO RELATED APPLICATION**

This application claims priority to PCT Appln. No. PCT/US2004/009050 filed August 12, 2004, and to German application 103 38 479.0 filed August 21, 2003.

At page 1, line 2, please add the following heading and subheading as shown below:

### **BACKGROUND OF THE INVENTION**

#### **1. Field of the Invention**

*At page 1, line 6, please add the following subheading as shown below:*

#### **2. Description of the Related Art**

*At page 2, line 26, please add the following heading as shown below:*

### **SUMMARY OF THE INVENTION**

*At page 2, line 27, please amend the paragraph as shown below:*

It was the object of the invention to provide silicone-modified polyvinyl acetals which contain a covalently bonded silicone moiety. This and other objects are achieved by providing silicone-modified polyvinylacetals prepared by copolymerization of vinyl ester with a

copolymerizable silicone macromer, hydrolysis to the corresponding polyvinyl alcohol, and subsequent acetalation.

*At page 2, line 30, please add the following heading as shown below:*

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

*At page 7, at line 7, please amend the following paragraph as shown below:*

Silicone macromers having a linear or branched structure, where R = methyl radical and where n = from 3 to 1000, preferably from 50 to 500, which contain one or two terminal (one a = 1 or both a = 1), polymerizable groups, or contain one or more polymerizable groups in the chain (both a = 0 and b ≥ 1), or contain one or two terminal polymerizable groups and at least one polymerizable group in the chain ([1] one or [2] both a = 1 and b ≥ 1) are particularly preferred. Examples of these are polydialkylsiloxanes having one or two vinyl, acryloyloxyalkyl, methacryloyloxyalkyl or mercaptoalkyl groups, it being possible for the alkyl groups to be identical or different and said alkyl groups containing 1 to 6 C atoms. α,ω-Divinylpolydimethylsiloxanes (such as, for example, the VIPO oils of Wacker-Chemie GmbH), α,ω-di(3-acryloyloxypropyl)polydimethylsiloxanes, α,ω-di(3-methacryloyloxypropyl)polydimethylsiloxanes, α,ω-di(acryloyloxymethyl)polydimethylsiloxanes, α,ω-di(methacryloyloxymethyl)polydimethylsiloxanes, α-monovinylpolydimethylsiloxanes, α-mono(3-acryloyloxypropyl)polydimethylsiloxanes and α-mono(3-methacryloyloxypropyl)polydimethylsiloxanes are particularly preferred. α-Mono(3-mercaptopropyl)polydimethylsiloxanes or α,ω-di(3-mercaptopropyl)polydimethylsiloxanes are also preferably used.

*At page 17, line 25, please amend the paragraph as shown below:*

Analyses: Solids content (SC): 45.6% (in methanol), GC analysis: residual VAc content 20 ppm; residual ethyl acetate: 1100 ppm, acid number (AN): 3.36 mg KOH/g, viscosity (Höppler, 10% strength solution in ethyl acetate) = 1.34 mPa·s; SEC  $M_w$  = ~~13,502~~ 13,502 g/mol,  $M_n$  = 5075 g/mol, polydispersity = 2.66; glass transition temperature (Tg): Tg = 30.1°C. Composition of the resin according to  $^1\text{H-NMR}$  ( $\text{CDCl}_3$ ): 10.75% by weight (12.28 mol%) of PDMS, 89.25% by weight (87.72 mol%) of PVAc.

*At page 18, line 20, please amend the paragraph as shown below:*

Analyses: SC: 50.0% (in methanol), GC analysis: residual VAc content 420 ppm; residual ethyl acetate: 1.06%, acid number: 2.80 mg KOH/g, viscosity (Höppler, 10% strength solution in ethyl acetate) = 1.39 mPa·s; SEC  $M_w$  = ~~13,640~~ 13,640 g/mol,  $M_n$  = 4497 g/mol, polydispersity = 3.03; glass transition temperature (Tg): Tg = 28.6°C. Composition of the resin according to  $^1\text{H-NMR}$  ( $\text{CDCl}_3$ ): 17.46% by weight (19.75 mol%) of PDMS, 82.54% by weight (80.25 mol%) of PVAc.

*At page 19, line 15, please amend the paragraph as shown below:*

Analyses: SC: 52.9% (in methanol), GC analysis: residual VAc content 60 ppm; residual ethyl acetate: 2.0%, AN: 2.24 mg KOH/g, viscosity (Höppler, 10% strength solution in ethyl acetate) = 1.23 mPa·s; SEC  $M_w$  = ~~10,777~~ 10,777 g/mol,  $M_n$  = 3626 g/mol, polydispersity = 2.97; glass transition temperature (Tg): Tg = 26.2°C.

*At page 20, line 12, please amend the paragraph as shown below:*

Analyses: SC: 48.5% (in methanol), GC analysis: residual VAc content < 10 ppm; residual ethyl acetate: 730 ppm; acid number: 11.22 mg KOH/g, viscosity (Höppler, 10% strength solution in ethyl acetate) = 1.25 mPa·s; SEC  $M_w = 14\text{--}500$  14,500 g/mol,  $M_n = 5612$ , polydispersity = 2.58;

glass transition temperature (Tg): Tg = 26.5°C.

Composition of the resin according to  $^1\text{H-NMR}$  ( $\text{CDCl}_3$ ): 10.68% by weight (12.21 mol%) of PDMS, 89.32% by weight (87.79 mol%) of PVAc.

*At page 21, line 10, please amend the paragraph as shown below:*

Analyses: SC: 48.3% (in methanol), GC analysis: residual VAc content < 10 ppm; residual ethyl acetate: 5520 ppm; residual isopropanol: 1200 ppm; acid number: 0 mg KOH/g, viscosity (Höppler, 10% strength solution in ethyl acetate) = 1.65 mPa·s; SEC  $M_w = 31\text{--}813$  31,813 g/mol,  $M_n = 6451$ , polydispersity = 4.93;

glass transition temperature (Tg): Tg = 25.9°C.

Composition of the resin according to  $^1\text{H-NMR}$  ( $\text{CDCl}_3$ ): 23.83% by weight (26.68 mol%) of PDMS, 76.17% by weight (73.32 mol%) of PVAc.

*At page 29, at line 22, please amend the paragraph as shown below:*

Example 6:

1770 ml of distilled water and 2140 ml of an 11.6% strength aqueous solution of the silicone-containing polyvinyl alcohol from example g), viscosity 1.6 mPa·s (DIN 53015; Höppler method; 4% strength aqueous solution) were initially introduced into a 6 liter glass reactor. The initially introduced mixture was cooled to 0°C with stirring. 152 ml of butyraldehyde, precooled to -4°C, were added in a period of 5 minutes and the batch was cooled to -1.0°C. At this temperature, 1114 ml of 20% strength HCl, precooled to -4°C, were added in order to induce the precipitation. The temperature increased as a result briefly to 1.6°C. A temperature of -1.0°C was established in the course of 30 minutes by cooling. During the cooling, the

initially clear batch became turbid at about ~~-0.6°~~ 0.6°C and the product was precipitated only 5 minutes after the beginning of the turbidity. After a reaction time of 40 minutes at -1.0°C, the temperature was increased to 23°C over a period of 3.5 hours, and this temperature was maintained for a further 2 hours. Thereafter, the product was filtered and was washed under running, distilled water until the filtrate was neutral. Drying to a solids content of at least 98 % was then effected, initially at 22°C, and then at 30°C in a vacuum drying oven. A silicone-containing polyvinyl butyral in the form of a white powder having 12.1% by weight (25.4 mol%) of vinyl alcohol units, 12.4% by weight (13.3 mol%) of vinyl acetate units, 54.6% by weight (35.4 mol%) of vinyl butyral units and 20.9% by weight (25.9 mol%) of polydimethylsiloxane units was obtained (evaluation by <sup>1</sup>H-NMR in CDCl<sub>3</sub> with trifluoroacetic acid as a shift solvent).

*At page 35, line 1, please amend the paragraph as shown below:*

Table 1:

| Example | Silicone content [% by weight] | Separation effect (Rating) |
|---------|--------------------------------|----------------------------|
| 1       | 13.2                           | 1                          |
| 2       | 13.6                           | 2-3                        |
| 3       | 14.9                           | 1                          |
| 4       | 24.9                           | 1                          |
| 5       | 12.6                           | 2                          |
| 6       | 20.9                           | 1                          |
| 7       | 22.5                           | 1                          |
| 8       | 28.5                           | 1                          |
| 9       | 30.7                           | 1                          |
| V10     | 0.0                            | [[7]] 6                    |